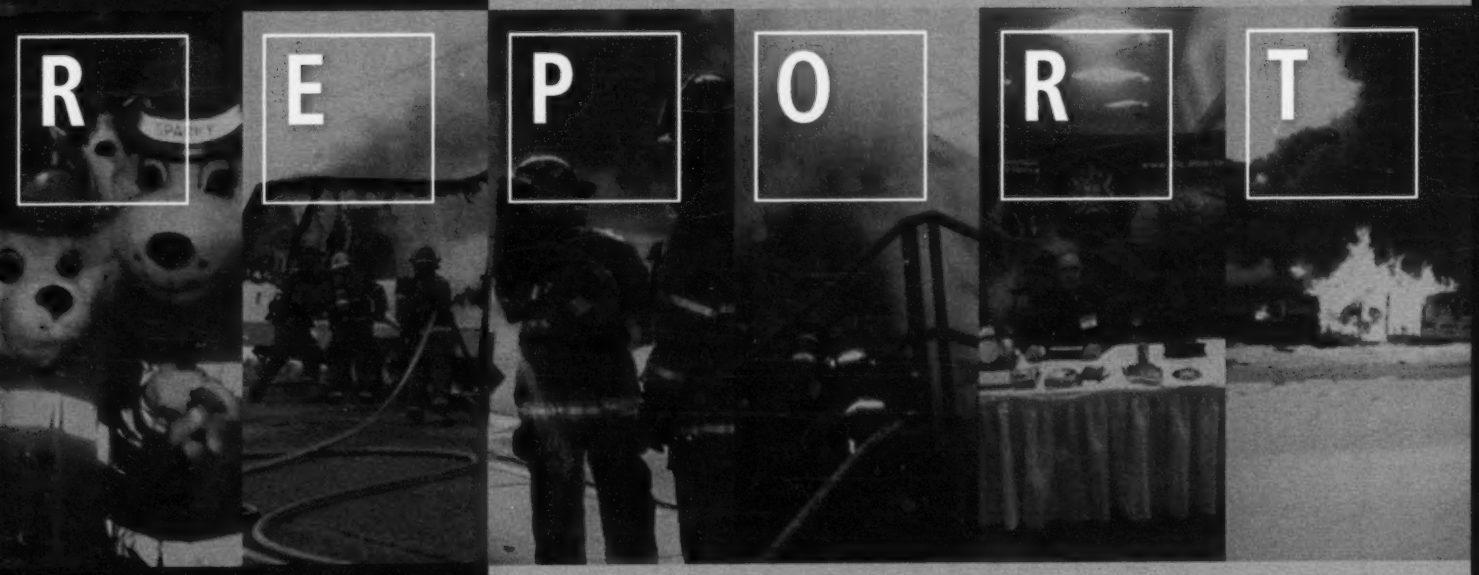
OFFICE OF THE FIRE COMMISSIONER

2011-2012 | Alberta Fire Commissioner's Statistical REPORT



Alberta

DATA LIMITATION

The statistical data used in this *2011-2012 Alberta Fire Commissioner's Statistical Report* is limited to fires that were reported to the Office of the Fire Commissioner, within the legislated timeframes, for the years 2011 and 2012. Any analysis undertaken using this data should acknowledge the data does not represent a complete listing of all fire incidents in the province.

Fire occurrences for 2011 and 2012 reported after the legislated timeframes will be presented in subsequent Annual Reports.

From this report forward, two years of data will be considered in each report; the reported year and the previous year. This will permit easier side by side comparisons and allow the Office of the Fire Commissioner to update the previous year's data where missing data has been obtained.

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Messages

Minister's Message

Greetings from the Honourable Doug Griffiths, Minister of Municipal Affairs

I am committed to working with fire and emergency services to ensure Albertans and our communities are safe.

Part of this commitment is publishing the Fire Commissioner's statistical report – an important resource that will help guide fire prevention efforts and improve the safety of Albertans. It highlights fire hazards and trends that firefighters have experienced across Alberta and provides critical information that firefighters need to know, so they can be as safe as possible in their work as emergency responders.

I can't emphasize enough the importance of reporting fires so that safety system failures can be tracked, issues can be identified such as a frequency of arson fires where additional enforcement may be needed, and life safety protection systems can be enhanced.

By working together and learning from the information in this report, we can help make Alberta a safer place by reducing the harmful and devastating effects of fires.

Honourable Doug Griffiths
Minister of Municipal Affairs

Fire Commissioner's Message

We are constantly faced with news reports of a fire that resulted in a loss of life or a loss of property. In the past months, there was a large apartment complex fire in Stony Plain causing 70 families to be displaced. A hunter's cabin burned in the wilderness near Fort Assiniboine with two lives lost. All of these fires are preventable. The number of reported fires decreased from 6,922 to 5,198 from 2011 to 2012. The number of fire incidences in 2011 is unusually high due to the Slave Lake fires that occurred that year. If those fires were considered as a single incident, then the number of fires in 2011 would go down to 5,255. This report will outline statistics without including the Slave Lake fires, which will have a separate analysis.

Fire departments play a huge role in changing behaviors and influencing codes and standards. It is imperative that you report fires as every fire that is reported helps us to establish trends and identify deficiencies. Reporting influences public education and code reviews while supporting the need for enforcement and prosecution when it comes to arson fire in the province.

Your work helps change our codes and improve the safety for Albertans. Please take a minute to report all fires in your district.

Yours in safety,

Trent R. West
Executive Director and Fire Commissioner

Fire Deaths and Injuries 2003 to 2012

Year	Population*	Fire Deaths	Alberta Fire Death Rate†	Fire Injuries	Alberta Fire Injury Rate‡
2003	3,034,362	24	0.8	323	10.6
2004	3,066,257	27	0.9	291	9.5
2005	3,182,178	38	1.2	247	7.8
2006	3,242,824	35	1.1	236	7.3
2007	3,354,411	23	0.7	212	6.3
2008	3,433,145	33	1.0	244	7.1
2009	3,520,268	28	0.8	208	5.9
2010	3,543,797	21	0.6	209	5.9
2011	3,584,304	26	0.7	185	5.2
2012	3,699,939	19	0.5	196	5.3
Total	—	274	—	2,351	—
Average	—	*27*	*0.82*	*235*	*7.1*

* Source: Alberta Municipal Affairs: **http://municipalaffairs.gov.ab.ca/mc_official_populations.cfm**

† Fire Death Rate: Number of fire deaths per 100,000 population.

‡ Fire Injury Rate: Number of fire injuries per 100,000 population.

FIRE Facts

- Based on probable causes of death, smoke inhalation accounted for 62%; burns 19%; physical injuries 4%; and other causes 14% of all fire deaths in 2011. In 2012 the probable causes of deaths were as follows, smoke inhalation (61%); burns (26%); physical injury (4%); and other injury (9%).
- The annual fire death rates in Alberta (for 2003-2012) have fluctuated around an average of 0.82 deaths per 100,000 population. The annual fire injury rates in Alberta have fluctuated around an average of 7.1 injuries per 100,000 population.

Location of FIRE Deaths 2011-2012

ATHABASCA COUNTY	1
BEAVER COUNTY	1
BEAVER FIRST NATION	1
BONNYVILLE NO. 87, M.D. OF	2
BOWDEN	2
CALGARY	7
CARDSTON COUNTY	1
CLEARWATER COUNTY	2
CROWSNEST PASS	1
EDMONTON	5
ERMINESKIN #138	1
FOOTHILLS NO. 31, M.D. OF	1
HINTON	1
KNEEHILL COUNTY	1
LACOMBE COUNTY	1
NANTON	1
RED DEER COUNTY	1
RED EARTH CREEK	1
ROCKY VIEW COUNTY	1
SAMSON CREE NATION	3
SMITH	1
SPECIAL AREAS NO. 2	1
SPIRIT RIVER	1
STRATHCONA COUNTY	2
VETERAN	1
WESTLOCK COUNTY	1
WINFIELD	1
WOODLANDS COUNTY	2
Total	**45**

Causes of Fire Deaths 2011

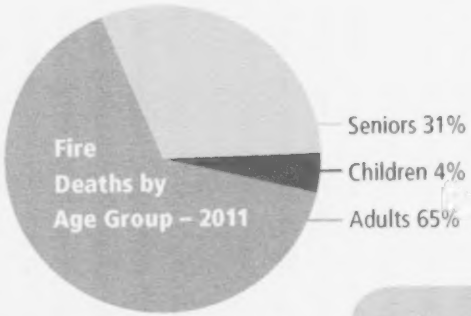
Property Classification	No.
One and Two Family Dwellings, Apartments	
Arson/set fire, unknown ignition scenario	1
Arson/set fire, unknown source ignited flammable liquid	3
Arson/set fire, open flame ignited exterior trim	1
Smokers' Material ignited upholstered furniture	3
Overheated cooking oil, grease, wax on stove top burner ignited floor covering	1
Child (< 11 years) playing with matches ignited bedding	1
Human Failing, unclassified scenario, ignited garbage	1
Unknown	10
Sub Total	**21**
Travel/Camping Trailer	
Unknown	2
Sub Total	**2**
Garage (individual residential parking)	
Victim asleep (suspect alcohol/drugs/medication), smoker's material ignited bedding	1
Sub Total	**1**
Outdoor Area	
Unknown source ignited unclassified wood/paper products	1
Sub Total	**1**
Automobile (includes cars, light trucks, vans, single body units)	
Arson/set fire, match/lighter ignited gasoline	1
Sub Total	**1**
Total	**26**

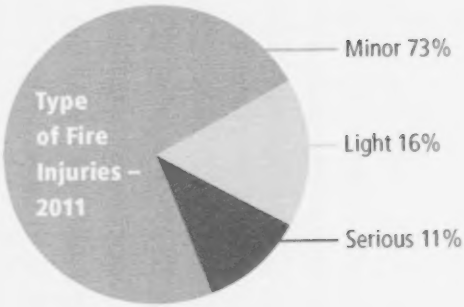
Causes of Fire Deaths 2012

Property Classification	No.
One and Two Family Dwellings, Apartments	
Combustible placed too close to stove top burner ignited cardboard	1
Physical/mental disability, smokers material ignited paper/wood products	1
Human Failing, metal chimney ignited unknown building components	2
Smoker's material (cigarette) ignited upholstered furniture	2
Electrical Failure of Switch/outlet ignited undetermined material	1
Smokers materials ignited upholstered (Suspected impairment by drugs/alcohol)	2
Arson/set fire, unknown scenario	1
Disposal of smokers materials ignited trash/rubbish	1
Unknown	4
Sub Total	**15**
Automobile (includes cars, light trucks, vans, single body units)	
Vehicle accident caused ignition of fuel oil	2
Electrical short circuit of unclassified electrical equipment	1
Sub Total	**3**
Tractor Trailer	
Industrial truck collision	1
Sub Total	**1**
Total	**19**

Fire Deaths and Injuries by Age and Status

2011

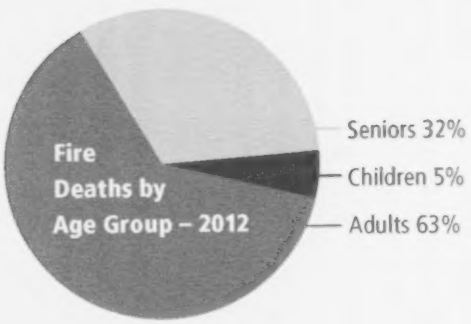


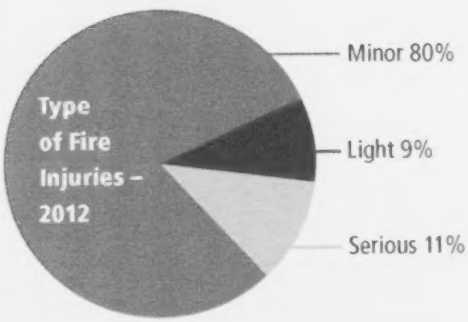


Seniors: 65 years of age and older
Adults: 18 - 64 years
Youth: 12 - 17 years
Children: 11 years and under
Note: No firefighters died in 2011-2012 fires.

Definitions of injuries are provided in the glossary, page 18.

2012





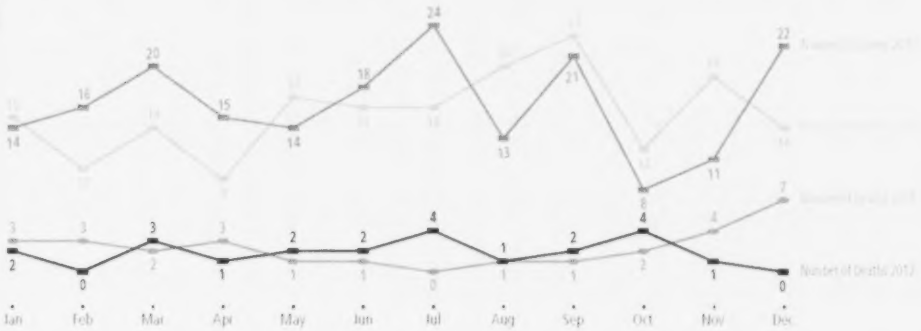
FIRE Facts

- On average, a fire related death occurred every 14 days in 2011 and every 16 days in 2012 in Alberta.
- In 2011 of the 26 fatalities and in 2012 of the 19 fatalities, 15% and 42% were asleep, 8% and 11% were impaired (alcohol/drugs/medication); 0% and 16% were bedridden/physically handicapped respectively. The condition of other fatalities is unknown or unclassified. Where known, actions of fatalities were: Entered/remained for firefighting (4% and 0%); did not act (12% and 21%); loss of judgment/panic (0 and 5%); and received delayed warning (0% and 5%).
- In 2011 and 2012 there were 185 and 196 injuries respectively. These injuries can be broken down as follows; 54% and 48% were awake and normal; 14% and 10% were asleep; 6% and 5% were impaired (alcohol/drugs/medication); 2% and 1% were physically/mentally impaired; and 3% and 1% children too young to react or left unattended. Actions of the injured were: Entered/remained for firefighting (41% and 27%); injured while attempting escape (11% and 20%); entered/remained for rescue purposes (3% and 4%); and entered/remained to save personal property (5% and 8%).
- There were 2 fire injuries reported per day, on average, in Alberta in both 2011 and 2012.
- In 2011 the civilian adult male to female ratio was 3:1 for fire deaths and 2:1 for fire injuries for 2011 while in 2012 the ratio was 2:1 for both fire deaths and injuries.

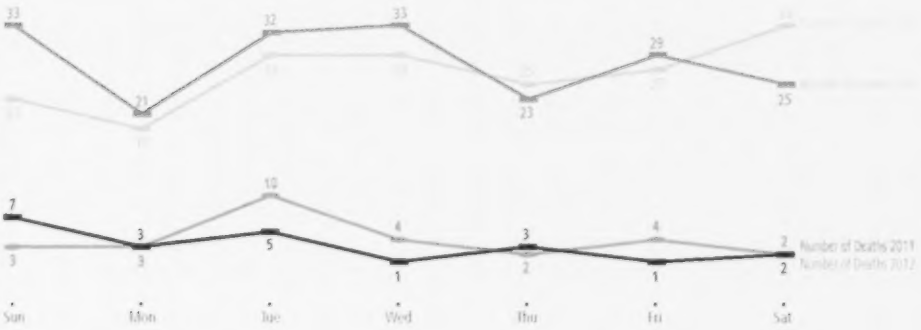
FIRE Facts

- The highest number of fire deaths per month in 2011 and 2012 occurred in December (6) and October (4) respectively. The highest number of fire injuries in 2011 were in September (23) and for 2012 in July (24).
- The highest number of fire deaths per day of week occurred on Tuesdays (in 2011) and Sundays (in 2012), while the highest number of fire injuries were on Tuesdays and Wednesday in 2011 (29); and for 2012 were on Sundays and Wednesdays (33).
- Fifty four percent in 2011 and forty seven percent in 2012, of all fire deaths occurred during sleeping hours between 10:30 p.m. and 6:29 a.m. The majority of fire injuries (38 and 43 percent respectively) occurred between 2:30 p.m. and 10:29 p.m.

Fire Deaths and Injuries by Month of the Year



Fire Deaths and Injuries by Day of the Week



Fire Deaths and Injuries by Time of Day

Time Periods	Fire Injuries			
	2011		2012	
	No.	%	No.	%
2:30 p.m. to 10:29 p.m.	70	37.8	83	42.6
10:30 p.m. to 6:29 a.m.	68	36.8	60	30.8
6:30 a.m. to 2:29 p.m.	43	23.2	51	26.2
Unknown	4	2.2	1	0.5
Total	185	100	196	100

Time Periods	Fire Deaths			
	2011		2012	
	No.	%	No.	%
2:30 p.m. to 10:29 p.m.	5	19.2	4	21.1
10:30 p.m. to 6:29 a.m.	7	26.9	6	31.6
6:30 a.m. to 2:29 p.m.	14	53.8	9	47.4
Unknown	—	—	—	—
Total	26	100	19	100

Fire Deaths by Major Property Classification

Property Classification		2011 Fire Deaths No.	2011 Fire Deaths %	2012 Fire Deaths No.	2012 Fire Deaths %
Residential	One and Two Family Dwellings	17	65.4	5	26.3
	Mobile Home (1 or 2 family units)	3	11.5	4	21.1
	Apartments	1	3.8	3	15.8
	Single Cabins	—	—	2	10.5
	Travel Trailer	1	3.8	—	—
	Camping Trailer (includes tent trailer)	1	3.8	—	—
	Rooming, Boarding, Lodging House – Unclassified	—	—	1	5.3
	Sub Total	**23**	**88.5**	**15**	**78.9**
Special Property and Transportation Equipment	Cars	1	3.8	1	5.3
	Brush/Grass and Light Ground Cover on Open Land/Field	1	3.8	—	—
	General Truck (includes mail truck, trailer truck, tow truck)	—	—	1	5.3
	Tractor Trailer	—	—	1	5.3
	Trucks (Includes light trucks/van/ single body units)	—	—	1	5.3
	Sub Total	**2**	**7.7**	**4**	**21.1**
Storage Properties	Garage (individual residential parking)	1	3.8	—	—
	Sub Total	**1**	**3.8**	—	—
Total		26	100	19	100

FIRE Facts

- Residential properties accounted for 88 percent of fire deaths in 2011 and 79 percent in the 2012.

Number of Fires by Major Property Classification

Property Classification	2011 Fires		2012 Fires	
	No.	%	No.	%
Residential	2,128	40	2,037	39
Special Property – Transportation Equipment	2,032	39	1,977	38
Storage Properties	380	7	361	7
Miscellaneous Property	315	6	363	7
Mercantile	109	2	131	3
Assembly	106	2	108	2
Industrial Manufacturing Properties	73	1	100	2
Business and Personal Service	72	1	56	1
Institutional	39	1	54	1
Unclassified	1	—	11	—
Total	5,255	100	5,198	100

Fire Deaths and Injuries by Major Property Classification

Property Classification	Fires Deaths		Fire Injuries	
	2011	2012	2011	2012
Residential	23	15	128	141
Special Property – Transportation Equipment	2	4	20	16
Storage Properties	1	—	13	11
Miscellaneous Property	—	—	5	2
Mercantile	—	—	6	6
Assembly	—	—	5	1
Industrial Manufacturing Properties	—	—	1	13
Business and Personal Service	—	—	4	1
Institutional	—	—	3	4
Unclassified	—	—	—	1
Total	26	19	185	196

FIRE Facts

- Most fire injuries occurred in residential properties, with 69% in 2011 and 72% in 2012.

Fire Losses by Major Property Classification

Property Classification	$ Property Losses 2011	2012
Residential	227,801,628	271,322,098
Special Property – Transportation Equipment	33,691,638	42,408,953
Storage Properties	31,490,435	26,456,166
Miscellaneous Property	17,451,615	17,818,840
Mercantile	18,710,598	35,528,521
Assembly	3,866,317	12,974,465
Industrial Manufacturing Properties	11,545,595	18,249,788
Business and Personal Service	15,623,048	7,555,647
Institutional	4,675,176	780,605
Unclassified	70,000	894,650
Total	364,926,050	433,989,733

Fire Losses in Alberta 2003 to 2012

Year	Fires	Deaths	Injuries	$ Losses	Adjusted $ Losses*
2003	5,647	24	323	348,481,771	333,794,799
2004	5,140	27	291	202,740,018	191,444,776
2005	5,197	38	247	450,243,320	416,506,309
2006	5,140	35	236	215,597,806	191,983,799
2007	5,310	23	212	333,256,887	282,660,634
2008	5,707	33	244	390,002,856	320,726,033
2009	5,259	28	208	520,267,851	428,203,993
2010	4,980	21	209	380,036,077	309,727,854
2011‡	5,255	26	185	364,926,050	290,315,076
2012	5,198	19	196	433,989,733	341,455,337
Total	52,833	274	2,351	3,639,542,369	3,106,818,609
Average	***5,283***	***27***	***235***	***363,954,237***	***310,681,861***

FIRE Facts

- During the 10-year period 2003 to 2012, the annual number of fires reported to the Fire Commissioner averaged 5,283. Also within this period, the lowest record number of fire related deaths was in 2012 with 19 deaths.
- The numbers of all fire related deaths and fire injuries have fluctuated between 19 and 38 (average 27) and 185 and 323 (average 235), respectively.

* Adjusted losses were calculated from actual losses using the Annual Consumer Price Index (C.P.I.) figures for Alberta obtained from Statistics Canada (2002 CPI = 100), **www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ09j-eng.htm**

‡ The number of fires for 2011 does not include the Slave Lake Fire which is considered a single incident with multiple exposure fires. The Slave Lake Fire will have a separate table.

FIRE Facts

- The province has experienced an average fire rate of 1.6 during the period 2003 to 2012.
- As a percentage of Gross Domestic Product (GDP), fire losses have decreased from 2010 to 2011 by 9%. As a percentage of personal income, fire losses have decreased by 11% over the same period.
- On average, 438 fires were reported to the Fire Commissioner each month during 2011 and 433 during 2012. Direct property losses averaged $30M per month during 2011 and $36M per month during 2012.
- On average there were 751 fires per day of week in 2011 and 743 fires per day of week in 2012. Property losses averaged $52M per day of week in 2011 and $62M per day of week in 2012.
- The largest number of fires occurred in residences (40% in 2011, 39% in 2012) and transport equipment (39% and 38% in 2011 and 2012 respectively).
- Where known, the most common fuel or energy associated with the source of ignition (2011, 2012) were:
  - Electricity (9%, 8%); and
  - Exposure Fire (12%, 4%).

Fire Losses Related to Economic Indices 2002 to 2011

Year	Fire Losses ($)	Gross Domestic Product ($ million)*	% of GDP	Personal Income ($ million)*	% of Personal Income
2002	272,588,413	150,594	0.18	101,072	0.27
2003	348,481,771	170,113	0.20	105,664	0.33
2004	202,740,018	189,743	0.11	115,269	0.18
2005	450,426,713	219,810	0.20	128,285	0.35
2006	215,597,806	238,886	0.09	146,058	0.15
2007	333,256,887	258,850	0.13	166,501	0.20
2008	390,002,856	262,864	0.15	179,550	0.22
2009	520,267,851	251,286	0.21	173,974	0.30
2010	380,036,077	261,457	0.15	178,932	0.21
2011	364,926,050	274,717	0.13	191,995	0.19

Note: 2012 GDP and Personal Income data currently not available from Statistics Canada.

Sources (for 2007-2011 data): Statistics Canada. CANSIM database, Table 384-0042 – Selected indicators – Households, annual. **Sources (for prior to 2007):** Statistics Canada, *Provincial and Territorial Economic Accounts: Data Tables,* catalogue number 13-018-X. Table 18. Selected Economic Indicators, Alberta; **http://www.statcan.gc.ca/pub/13-018-x/13-018-x2011001-eng.htm**

Fire Rates and Per Capita Losses 2003 to 2012

Year	Population	Fires	Fire Rate*	Loss Estimate	$ Loss/Capita
2003	3,034,362	5,647	1.9	348,481,771	114.8
2004	3,066,257	5,140	1.7	202,740,018	66.1
2005	3,182,178	5,197	1.6	450,243,320	141.5
2006	3,242,824	5,140	1.6	215,597,806	66.5
2007	3,354,411	5,310	1.6	333,256,887	99.3
2008	3,433,145	5,707	1.7	390,002,856	113.6
2009	3,520,268	5,259	1.5	520,267,851	147.8
2010	3,543,797	4,980	1.4	380,036,077	107.2
2011	3,584,304	5,255	1.5	364,926,050	101.8
2012	3,699,939	5,198	1.4	433,989,733	117.3

* Fire Rate = Number of fires per 1,000 population.

Fire Losses by Major Sources of Ignition*

Major Sources of Ignition	No. of Fires		%		Fire Deaths		Fire Injuries		Property Loss $	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Not Determined	1,941	1,570	28	31	17	6	27	21	220,576,382	136,826,295
Smoker's Material and 'Open' Flames	1,196	901	17	17	7	6	56	54	182,842,446	97,630,165
Exposure	1,449	532	21	10	—	—	2	2	247,968,478	18,575,479
Miscellaneous	766	623	11	12	1	2	9	12	31,812,933	36,661,756
Electrical Distribution Equipment	501	512	7	10	—	2	7	15	42,770,512	38,349,369
Cooking Equipment	467	472	7	9	1	1	46	63	35,537,543	55,622,920
Heating Equipment	238	234	3	4	—	2	22	10	27,586,630	32,854,530
Other Electrical Equipment	189	144	3	3	—	—	6	5	8,292,181	9,679,316
Appliances and Equipment	146	168	2	3	—	—	10	14	6,958,022	8,481,721
No Igniting Object	29	42	1	1	—	—	—	1	4,252,430	3,785,236
Total	6,922	5,198	57	43	26	19	185	196	808,597,557	438,466,787

* Includes MD of Lesser Slave Lake, Town of Slave Lake and Widewater

Fire Losses by Major Acts or Omissions*

Major Materials First Ignited	No. of Fires		%		Fire Deaths		Fire Injuries		Property Loss $	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Mechanical, Electrical Failure, Malfunction	1,204	1,161	17	22	—	2	24	39	75,773,072	75,036,059
Arson or 'Set' Fires	902	866	13	17	6	1	12	18	85,212,781	72,564,868
Human Failing	642	697	9	13	2	5	47	47	62,986,576	47,957,138
Misuse of Source of Ignition	360	367	5	7	4	3	30	17	28,346,534	48,316,909
Misuse of Material Ignited	310	308	4	6	1	1	48	53	30,206,288	41,253,434
Construction, Design, Installation Def.	107	83	2	2	—	—	3	2	13,628,928	15,483,827
Vehicle Accident	83	66	1	1	—	3	4	—	3,081,235	1,119,993
Misuse of Equipment	59	60	1	1	—	—	—	2	9,116,685	5,055,514
Not Determined	2,502	1,107	37	22	12	4	15	13	460,609,489	109,301,639
Miscellaneous	414	250	6	5	1	—	—	2	12,308,778	6,921,644
Act or Omission – Not Applicable	339	233	5	4	—	—	2	3	27,327,191	15,455,762
Total	6,922	5,198	100	100	26	19	185	196	808,597,557	438,466,787

* Includes MD of Lesser Slave Lake, Town of Slave Lake and Widewater

Fire Losses by Major Materials First Ignited

Major Materials First Ignited	No. of Fires		%		Fire Deaths		Fire Injuries		Property Loss $	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Building Components	733	638	11	12	2	2	13	17	87,665,423	85,045,760
Flammable and Combustible Liquids	605	556	9	11	4	1	61	68	46,050,350	50,321,086
Wood, Paper Products	390	450	6	9	1	2	9	15	23,952,721	43,323,811
Agricultural Products	273	279	4	5	—	—	5	10	17,402,460	15,902,548
Chemicals	398	323	6	6	—	1	13	17	20,120,263	8,511,319
Clothing, Textiles	142	165	2	3	—	—	7	9	15,783,396	11,016,195
Furniture, Furnishings	169	173	2	3	5	4	27	18	19,331,779	21,432,404
Flammable Gases	74	72	1	1	—	—	18	16	5,666,060	3,514,563
Not Determined	3,142	1,751	45	35	13	7	26	21	539,592,726	166,206,221
Miscellaneous	994	791	14	15	1	2	5	5	33,032,379	33,192,880
Total	6,922	5,198	100	100	26	19	185	196	808,597,557	438,466,787

FIRE Facts

- Arson and vandalism accounted for 13% and 17% of all fires in Alberta in 2011 and 2012. This means that approximately 76 fires were deliberately set on average per month.
- Where known, materials most commonly ignited first were building components (11%, 12%); flammable and combustible liquid (9%, 11%); wood, paper products (6%, 9%) and not determined(46%, 34%) of the fires.

Initial Detection of Fires

Method of Initial Detection	2011 Fires		2012 Fires	
	No.	%	No.	%
Visual Sighting/Personal Detection	5,972	87	4,400	85
Smoke Alarm: Single Station	163	2	151	3
Smoke Detector: Linked To Alarm System	95	1	100	2
No Initial Detection/Burnt Out	79	1	70	1
Initial Detection-Unclassified	113	2	96	2
Automatic Sprinkler System	18	—	31	1
Heat Detector: Linked To Alarm System	7	—	5	—
Automatic System Other Than Sprinkler	—	—	3	—
Initial Detection – Unknown	475	7	342	6
Total	6,922	100	5,198	100

Major Known Causes of Home Fires

Fire Causes	No. of Fires		%		Fire Deaths		Fire Injuries		Property Loss $	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Cooking	403	370	20	19	1	—	40	60	33,300,269	22,196,998
Arson/Set Fire	215	259	11	14	5	1	6	13	21,301,752	41,720,056
Smoking	255	213	13	11	3	6	23	12	27,362,656	21,908,337
Electrical Distribution Equipment	188	175	9	9	—	1	5	7	21,170,811	23,013,627
Exposure Fire	164	103	8	5	—	—	1	—	11,177,456	4,582,736
Heating equipment Related	142	137	7	7	—	2	14	6	20,723,505	23,877,233
Light/Fluorescent Bulb	33	22	2	1	—	—	2	1	1,245,565	4,909,318
Candle (accident)	39	42	2	2	—	—	5	6	4,297,998	3,478,952
Appliance/Equipment Related	53	51	3	3	—	1	4	6	3,186,219	4,236,418
Clothes Dryer	22	36	1	2	—	—	—	1	718,805	995,922
Welding/Torch Too Close	6	13	—	1	—	—	—	1	497,100	15,367,326
Child Fireplay	15	11	1	1	1	—	6	—	1,483,085	512,295
Flammable/Combustible Liquid Ignition	16	17	1	1	—	—	2	2	389,328	1,079,673
Other Causes – Unknown	410	422	21	22	11	4	12	15	65,430,307	93,957,480
Flammable Gas Ignition	11	10	1	1	—	—	4	4	877,349	707,959
Match/Lighter Not Used For Smoking	6	15	—	1	—	—	—	2	156,851	1,988,545
Inadequate Control of Open Fire	3	4	—	—	—	—	—	—	412,162	38,900
Total	1981	1900	100	100	21	15	124	136	213,731,218	264,571,775

Fires by Method of Fire Control and Extinguishment

Method of Fire Control and Extinguishment	2011 Fires		2012 Fires	
	No.	%	No.	%
Fire Department Water	2,959	43	2,853	55
Hand Held Fire Extinguisher	590	9	514	10
Stand Pipe and Hose Systems	78	1	127	2
Makeshift Fire Fighting Aid	404	6	382	7
Sprinkler System	29	—	47	1
Burned Out	509	7	381	7
Unknown – Miscellaneous	2,147	31	748	15
Fixed System – Other than sprinklers	8	—	6	—
Fire Department – Other than water	198	3	140	3
Total	6,922	100	5,198	100

FIRE Facts

- Visual sighting or other means of personal detection (86% in 2011 and 84% in 2012) was the primary means of initial detection of fires in both years, while smoke alarms/ detector devices accounted for 3% and 5% in 2011 and 2012 respectively.
- Where the method of fire control and extinguishment is known, fire departments extinguished 46% in 2011 and 58% in 2012 of all reported fires.

Home Fires by Major Areas of Fire Origin

Area of Origin	No. of Fires		%		Fire Deaths		Fire Injuries		Property Loss $	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Kitchen/Cooking Area	462	406	15	20	1	2	44	61	39,935,107	50,850,336
Court/Patio/Terrace	146	160	5	8	—	—	4	7	17,007,964	11,636,629
Sleeping (under 5 occupants)	128	133	4	7	4	—	18	22	11,086,300	24,922,319
Lounge/Living Room	131	118	4	6	9	8	24	11	20,884,084	18,976,206
Exterior Wall	139	90	4	5	—	—	2	2	14,162,808	4,875,695
Vehicle (garage)	69	68	2	3	—	—	2	3	8,227,030	10,058,611
Exterior Balcony/Porch	87	65	3	3	—	—	10	3	12,785,310	21,567,466
Laundry Area	54	70	2	4	—	—	2	3	2,263,692	4,171,214
Heating Equipment Room	41	44	1	2	—	1	5	4	6,831,718	4,408,513
Washroom/Locker room	28	38	1	2	—	—	—	5	1,637,268	5,207,583
Ceiling and Roof/Ceiling Space-Attic	41	36	1	2	—	—	1	2	7,305,665	7,845,503
All Other Areas	749	636	24	31	3	1	12	14	130,601,071	82,667,132
Area of Origin – Unknown	1,019	134	34	7	6	—	4	3	321,950,321	22,975,253
Total	3,094	1,998	100	100	21	15	128	140	594,678,338	270,162,460

FIRE Facts

- Home fires accounted for 81% (21 of 26) in 2011 and 79% (15 of 19) in 2012 of all fire deaths; 69% in 2011 and 72% in 2012 of all fire injuries and 62% in both 2011 and 2012 of all property losses from fires.
- Most Alberta home fires (2011, 2012) started in kitchens (15%, 20%), court/patio/terrace (5%, 8%), and bedrooms (4%, 7%).

Home Fires by Type of Home

Type of Home	No. of Fires		%		Fire Deaths		Fire Injuries	
	2011	2012	2011	2012	2011	2012	2011	2012
One and Two Family Dwellings	2,396	1,380	77	69	17	5	76	71
Apartments, Tenements and Flats	481	459	16	23	1	6	45	61
Mobile Homes	217	159	7	8	3	4	7	8
Total	3,094	1,998	100	100	21	15	128	140

- The ignition of cooking oil accounted for 25 percent of stovetop cooking related fires in both 2011 and 2012. It also accounted for 65 percent in 2011 and 38 percent in 2012 of stove-top cooking related injuries.
- In 2011, of the 21 home fire fatalities, 11 (or 52%) occurred in homes with no smoke alarms. In 2012, of the 15 home fire fatalities, 7 (or 58%) occurred in homes with no smoke alarms.

Home Fires by Smoke Alarm Operation

Smoke Alarm Installation

Status	Fires	% of Fires		Deaths*		% of Deaths		Injuries		% of Injuries		$ Losses		% of $ Losses	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Not Installed	3,179	69	58	11	7	52	58	38	28	31	20	487,956,734	150,429,616	82	56
Installed	1,737	31	42	10	5	48	42	86	109	69	80	104,499,916	118,316,632	18	44
Total	4,916	100	100	21	12	100	100	124	137	100	100	592,456,650	268,746,248	100	100

* Please refer to the research article titled *"Making sense of smoke alarm data and home fire deaths,"* in the August 2004 issue of *Alberta FIREnews* (pages 16 to 19), for a detailed statistical analysis of home fire deaths in relation to smoke alarms. Previous issues of *Alberta FIREnews* are posted at **www.ofc.alberta.ca**.

Activation of Smoke Alarms

Status	Fires	% of Fires		Deaths	% of Deaths		Injuries		% of Injuries		$ Losses		% of $ Losses	
		2011	2012		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Activated	668	37	40	6	20	80	49	59	57	54	38,531,831	55,967,921	37	47
Not Activated	478	26	29	3	30	—	30	23	35	21	10,291,348	13,568,200	10	11
Activation – Unknown	591	36	31	6	50	20	7	27	8	25	55,676,737	48,780,511	53	41
Total	1,737	100	100	15	100	100	86	109	100	100	104,499,916	118,316,632	100	100

Alarm Assistance to Occupants

Status	Fires	% of Fires		Deaths	% of Deaths		Injuries		% of Injuries		$ Losses		% of $ Losses	
		2011	2012		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Occupant Evacuation Unknown	26	5	3	1	50	—	2	3	4	5	932,537	1,165,364	2	2
Not Applicable/ No Occupants	86	11	15	—	—	—	—	5	—	8	4,956,880	7,936,708	13	14
Alarm Assisted Occupants to Evacuate	476	72	70	2	50	25	42	37	86	63	31,416,662	44,662,422	82	80
Alarm Did Not Assist Occupants to Evacuate	80	12	12	3	—	75	5	14	10	24	1,225,752	2,203,427	3	4
Total	668	100	100	6	100	100	49	59	100	100	38,531,831	55,967,921	100	100

Reasons – Alarms Did Not Assist

Status	Fires	% of Fires		Deaths*		% of Deaths		Injuries		% of Injuries		$ Losses		% of $ Losses	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Alarm inaudible	5	9	3	—	—	—	—	—	—	—	—	543,315	1,000	44	—
Physical/ mental challenge	2	2	3	—	—	—	—	—	1	—	7	200	52,000	—	2
Unable to evacuate – age related	4	7	3	—	1	—	33	1	10	20	71	70,648	1,536,500	6	70
Unnecessary to evacuate	61	77	75	—	1	—	34	4	1	80	8	525,589	231,926	43	11
Under the influence of drugs/ alcohol	8	5	16	—	1	—	33	—	2	—	14	86,000	382,001	7	17
Total	80	100	100	—	3	—	100	5	14	100	100	1,225,752	2,203,427	100	100

Reasons – Alarms Not Activated

Status	Fires	% of Fires		Deaths*		% of Deaths		Injuries		% of Injuries		$ Losses		% of $ Losses	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Unsuitable location	19	5	3	—	—	—	—	1	2	3	9	1,255,304	91,850	12	1
Dead battery	41	10	7	1	—	33	—	10	3	33	13	902,000	748,941	9	6
No battery	54	13	9	2	—	67	—	6	6	20	26	1,290,891	3,598,329	13	27
AC not connected/ disabled	40	7	10	—	—	—	—	1	4	3	17	1,118,200	1,172,602	11	8
Mechanical failure	17	3	4	—	—	—	—	1	—	3	—	219,750	101,301	2	1
Not enough smoke*	307	62	66	—	—	—	—	11	8	38	35	5,505,203	7,855,177	53	57
Total	478	100	100	3	—	100	—	30	23	100	100	10,291,348	13,568,200	100	100

* Since most of these fires originated in outside areas or structural areas of homes, an adequate amount of smoke did not reach inside the homes to trigger the smoke alarms.

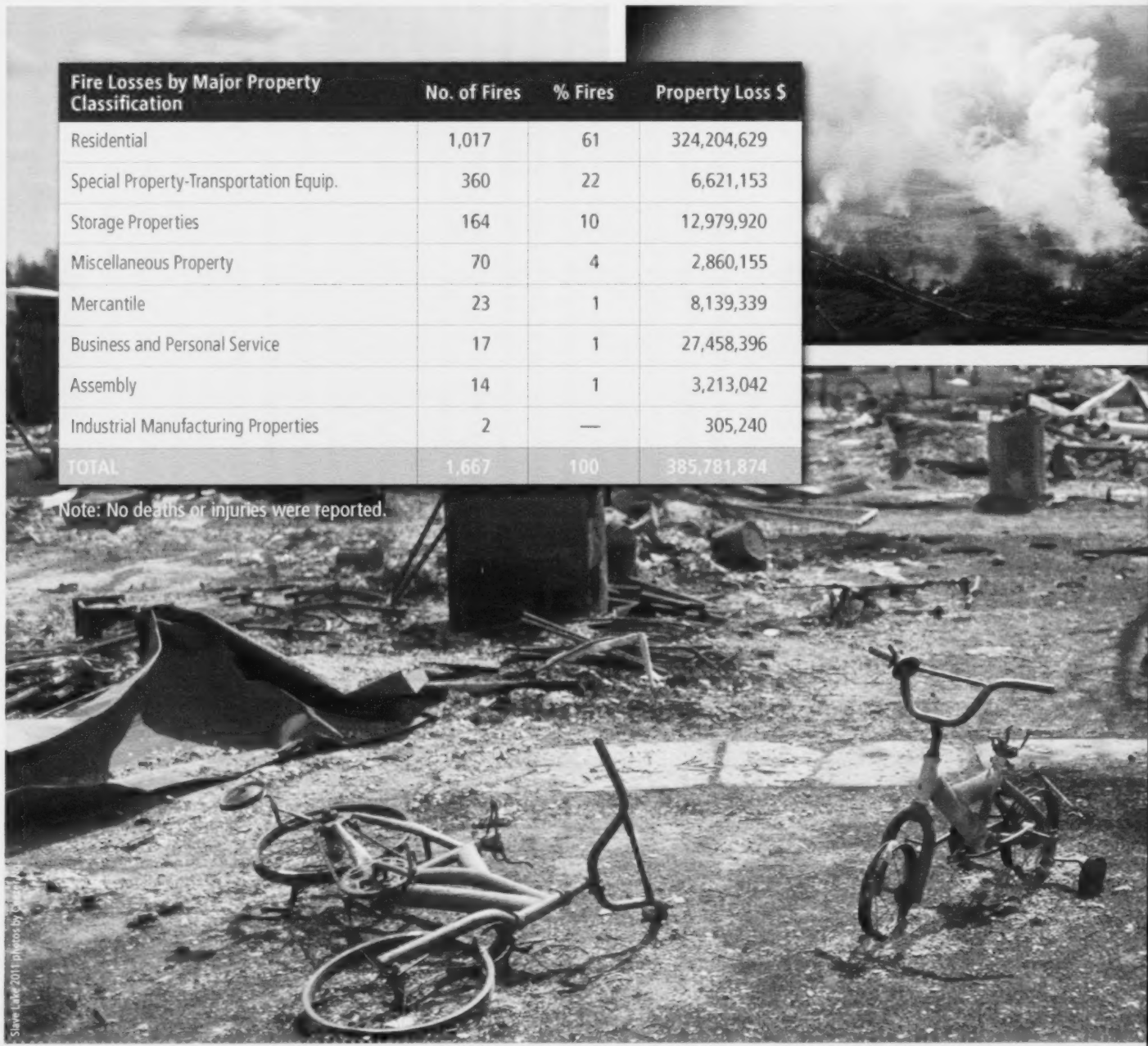
2011 Slave Lake Fire Data

(including the MD of Lesser Slave, the Town of Slave Lake and Widewater)

Due to the scale of the 2011 Slave Lake fire, inclusion in the standard reporting would create a false trend as we recognize the occurrence was an anomaly. The total number of fires and fire losses for most of the Alberta report excludes the Slave Lake fire event. The following table identifies fire losses from the Slave Lake and Area incident.

Fire Losses by Major Property Classification	No. of Fires	% Fires	Property Loss $
Residential	1,017	61	324,204,629
Special Property-Transportation Equip.	360	22	6,621,153
Storage Properties	164	10	12,979,920
Miscellaneous Property	70	4	2,860,155
Mercantile	23	1	8,139,339
Business and Personal Service	17	1	27,458,396
Assembly	14	1	3,213,042
Industrial Manufacturing Properties	2	—	305,240
TOTAL	1,667	100	385,781,874

Note: No deaths or injuries were reported.



Slave Lake 2011 photos by

For a more detailed description of the following variables, please refer to the *Alberta Fire Statistics Reporting Manual* available on the Office of the Fire Commissioner website at www.ofc.alberta.ca.

Act or Omission

The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.

Incendiary or Set fires
Includes arson, suspected incendiarism, riot, mischief or vandalism.

Misuse of Source of Ignition
Includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing with source of ignition, welding or cutting too close to combustible material or torch too close to combustible material.

Misuse of Material Ignited
Includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheated cooking oil, combustible placed too close to heat, and improper storage.

Mechanical and Electrical Failure or Malfunction
Includes part failure, automatic or manual control failure, electrical short circuit and part worn out.

Construction, Design or Installation Deficiency
Includes construction or design deficiency, installation too close to a combustible, other installation deficiency or over fusing.

Misuse of Equipment
Overfuelling, includes any misuse of equipment or tools.

Human Failing
Includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

Area of Origin

The area of a building or vehicle where the fire started.

Means of Egress
The area allowing an individual transit or a way of going out. Includes hallway, stairway, escalator, lobby and elevator.

Assembly, Sales Area
Areas where groups of people gather. Includes theatre, arena, lounge, living room, sales or show room, library, museum and sports facility.

Function Area
The area where a mode of action or activity is undertaken. Includes sleeping area, dining area, bar, washroom, office, laboratory, printing and photographic reproduction area, kitchen, laundry room, operating room, performance area and manufacturing area.

Storage Area
The area inside a building where items are stored. Includes product storage area, closet, equipment area, records storage area, shipping and receiving area, trash and rubbish area, vehicle garage and agricultural product storage area.

Service Facilities
Conveyance items such as dumbwaiters, service shafts, laundry and garbage chutes, heating and cooking ducts and chimneys or gas vents.

Structural Area
Includes crawl space, balcony, ceiling and floor assembly, wall assembly, exterior wall or exterior roof and awning or canopy.

Vehicle Area
Includes engine area, fuel area, control area, passenger area and cargo area.

Outside Area
Includes open area such as lawn, field or park, court, patio, parking area, outdoor storage area and trash or rubbish area.

Death

A person killed accidentally as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.

Fire Death
Refers to a person who died as a direct result of a fire, either by smoke inhalation, burns or physical injury. Fire deaths also include persons killed as a result of a motor vehicle collision, an arson fire, an explosion, suicide, etc. where the Medical Examiner's Office has concluded the cause of death was due to fire.

Fuel or Energy

The fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.

Injuries

A person accidentally injured as a direct result of a fire (a member of the fire department accidentally injured while in the process of fighting a fire or injured as a result of an accident while en route to or returning from the scene of an actual fire is considered a fire action injury).

Minor Injury
An injury that does not require hospitalization of over a 24-hour period or absence from work of not more than one full day.

Light Injury
An injury that required admission to a hospital of over 24 hours up to 48 hours and/or absence from work for a period of two to fifteen days.

Serious Injury
An injury that required admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

Material First Ignited

The actual material that ignites and creates the fire condition.

Structural Components, Finish Materials
Includes roof covering, wall covering, floor covering, structural component, ceiling covering and insulation.

Furniture, Furnishings
Includes furniture, ironing board, mattress, bedding, drapery and broom, mop or brush.

Clothing, Textiles
Includes clothing, fabric, fur and tarpaulin.

Wood, Paper Products
Includes wood, wood shavings, paper, cardboard and paper stock.

Flammable Liquids
Includes gasoline, fuel oil, flammable liquids, paint, varnish, tar, asphalt, polish and wax.

Flammable Gases
Includes natural gas, propane, anaesthetic gas, acetylene and hydrogen.

Chemicals
Includes starch, flour, cellulose nitrate, plastic, oxidizing material, magnesium and alloys, titanium, natural or synthetic rubber and ammonium nitrate.

Agricultural, Forestry Products
Includes fibres, grains, hay, trees, felled timber, grass, fertilizer and manure.

Miscellaneous
Includes coal, garbage, trash, oily rags and artificial trees.

Property Classification

The principal use or occupancy of the building.

Assembly
Property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

Institutional
Property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for the aged, children's hospitals, hospitals and clinics.

Residential
Property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

Business and Personal Service
Property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

Mercantile
Property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

Industrial Manufacturing Properties
Property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

Storage Properties
Property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

Special Property and Transportation Equipment
Mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

Miscellaneous
Includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

Source of Ignition

The actual equipment, device or object which brings about ignition.

Cooking Equipment
Includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

Heating Equipment
Includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

Appliances and Equipment
Includes dryer, air conditioning equipment, pressing iron and incinerator.
Smoker's Material and "Open" Flames
Includes cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

Exposure
Includes exposure from an attached or detached structure, lumber yard, open fire, forest, grass and brush.

Miscellaneous
Includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

Digital images and photos submitted to enhance this report by fire and emergency services are gratefully acknowledged.

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SO

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Interactive website on fire prevention and safety: **www.3minutedrill.alberta.ca**

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